

REPORT OF THE PRESIDENT FOR THE YEAR
ENDING NOVEMBER 30, 1879.

The history of the Academy for the year ending Nov. 30, 1879, is not very remarkable. It may be briefly stated.

The Academy offered, Feb. 1879, to receive on deposit the collections made by the second geological survey of the State of Pennsylvania; and asked the Legislature to appropriate money towards enlargement of the building for the purpose of affording ample space for the display of a distinct collection of specimens illustrative of all departments of the natural history of Pennsylvania, including those of the geological surveys. It is believed that a separate museum of the kind proposed would be attractive and interesting to visitors generally, as well as instructive. It would ultimately become an objective representation of all the natural resources of the State, and possibly suggestive of new applications of them in the industrial arts, and at the same time tend to enhance in public estimation the value of the study of the natural sciences.

All the members of the Legislature were invited to visit the institution in the evening of April 25th. Several of those who were present at this reception expressed opinions favorable to granting the petition of the Academy; but the Legislature finally adjourned without acting upon it.

A proposition to amend the by-laws, made May 6th, was unanimously rejected Oct. 28th.

Experience has demonstrated that the ordinary income of the Society is very much less than the amount of its necessary expenses. After due consideration of the subject by the council it was proposed to ask contributions from members and others towards the creation of a maintenance or working fund of sufficient amount to supply at least current deficiencies.

A committee of forty members was appointed, Sept. 16th, by the President, under authority of the Academy, to solicit contributions. The committee met, organized, and issued a circular in

which reasons for the appeal are stated. Several subscriptions have been received and promised, making an aggregate of about \$3000, or about one-twentieth of the amount considered to be necessary.

The financial condition of the Academy is fully stated in the report of the Treasurer.

Two young men have been recipients of the benefits of the Jessup Fund, one during the entire year, and the other for nine months. The application of this fund has been so beneficent in the past as to suggest that additional scholarships or fellowships of the same kind would contribute largely to the general progress of the natural sciences in this community.

The extent of increase of the museum and of the library, and their condition, are stated in the annual reports of the curators and the librarian.

The annual reports of the several sections of the Academy indicate that they are active and prosperous.

The Biological and Microscopical section gave a public reception on the first Monday of April, and a second on the first Monday of November. The Entomological section participated in the last. It is estimated that more than two thousand ladies and gentlemen were present at each reception, and all seemed pleased. Receptions of the kind are believed to be advantageous to the general interests of the Society.

The average attendance at the meetings has been 32; the most numerous, Feb. 4, 109, and the least, July 15 and August 26, 14.

Although well known to the few old members still living, it may be well on this occasion to recall part of the old story of the foundation of the Academy.

All the founders and early members were not at the time masters, or even advanced students, in any department of natural history. They were, generally speaking, young men whose livelihood depended upon the profits of their daily avocations—men who, though possibly not qualified to be professors, were learned enough to discern that they might lessen their own ignorance of natural things by employing their leisure together, in a joint way to learn what others already knew, and possibly add something to the common stock of knowledge.

The first formal meeting for organization, January 25, 1812, is recorded as a "meeting of gentlemen, friends of science and of

rational disposal of leisure moments." At a subsequent meeting the association is described as "a society of generous, good-willing emulation for the acquirement, increase, simplification and diffusion of natural knowledge."

During the earliest years of the Society the members were often entertained at the meetings by some one, previously appointed, reading about some natural history subject, selected from a published book or essay, which was discussed after the reading. Such proceedings imply that mutual improvement was one of the objects of the association.

For the reason that the founders and first members regarded themselves to be learners they called their Society an Academy, meaning a school, the word being derived according to lexicographers from *Ακαδημος*, the name of an Athenian citizen whose house was converted into a school in which Plato taught.

The general policy of the organization included the idea of securing "the greatest good to the greatest number," and that all should cheerfully and sincerely co-operate to promote the welfare of the Society according to the ascertained views of the majority. March 21, 1812, the Society consisted of the six founders. In the minutes of the meeting of that day they say, "unless we be faithful and honorable to each other, and zealous for the interests of science, such an establishment as we desire may never take place."

The qualifications for membership were friendliness to science and good moral reputation and nothing more. To this day candidates are not required to possess any other qualifications. Membership of this Academy does not, nor was it ever intended to, imply any kind or degree of scientific attainment, any more than membership of a building association implies mechanical skill in any department of construction or house building.

There are societies whose certificate of membership is, in public estimation, at the same time a certificate of scientific attainments. The Academy cannot be properly classed with such societies, nor is there any conclusive reason why it should aspire to be, or to compete with institutions established on different principles or for different purposes.

The co-operative principle seems to have been recognized by the founders. They began at once to collect materials for a museum, and books for a library, to the use of which all the members were

equally entitled, subject only to such restrictions as were considered necessary for their preservation.

From the formation of the society to the present time, its policy has been based on such principles, and to those principles it owes much of its substantial prosperity and present condition.

Original research was not the sole object of the society, nor was it ever designed that the society should be composed exclusively of masters in science, specialists, or experts. Members worthy to be so entitled are most desired and honored, most beneficial to the Society, and most deserving to be aided in all reasonable ways, in the use of its accumulated means and facilities of study, not in conflict with the rights which are alike and equally common to all members, learned and unlearned. No part of the museum or library can be held in reserve for the exclusive use of any class of specialists.

The purposes of the Academy are, and always have been:—

1st. To aid and encourage those who may labor to increase knowledge of natural objects, and of the laws under which they exist.

2d. To encourage and aid novitiates in natural science.

3d. To diffuse knowledge resulting from original researches, among the votaries of natural science everywhere.

4th. To render knowledge of the natural sciences generally attractive and interesting to the public.

The purpose first named, to encourage original investigations, is manifest in the free access to the museum and library, given to specialists who may desire to use those sources of information in their studies, and in the publication of the results of their labors when desired. This sort of encouragement is not restricted to members of the society. Publishing discoveries made elsewhere, or by others than members of the Society, is no discredit to the liberality of the Academy, and is surely not calculated to impede original research.

The purpose placed second, to encourage and aid novitiates, is realized by instructing them individually, and pointing out to them approved methods of study in order that they may become qualified to engage profitably in original investigations. The many beneficiaries of the Jessup Fund bear witness to the beneficent influences of the Academy under this head. They compensate the institution for the benefits it confers by the work they do for

it under the direction of the curators, and by becoming under its auspices practical, working naturalists.

The importance of this purpose lies in the fact that initiatory training and elementary instruction are indispensable to the attainment of the highest grades of learning.

The third named purpose, to diffuse knowledge, is carried out by publishing a Journal, and the Proceedings of the Academy. The Journal now consists of eight octavo and seven quarto volumes: the fourth part of the eighth volume is in preparation. The "Proceedings of the Academy" numbers thirty-one 8vo volumes. During the year 335 pages have been printed.

The entomological section of the Academy has published during the year, more than two hundred pages of original matter, resulting from the researches of members of the section and others. Their printing has been done by members of the section in the hall of the Academy.

It is proper to mention in this connection, "The Natural History of the Agricultural Ant of Texas," a monograph of the habits and architecture of *Pogonomyrmex barbatus*, by Henry Christopher McCook, a member of the society, which has been issued with the imprint and under the auspices of the Academy. It is an octavo volume of 310 pages, illustrated by 24 plates.

Also the "Manual of Conchology, Structural and Systematic, with illustrations of the species," by George W. Tryon, Jr., conservator of the conchological section of the Academy, published by the author, and issued from the Academy. The first volume has appeared during the year. It is an octavo volume of 316 pages, illustrated by 112 plates, embracing 671 figures skilfully drawn by Dr. Edward J. Nolan, who is the Librarian and Recording Secretary of the Society.

Mr. Herman Strecker, of Reading, Pa., a member of the Academy, has published an octavo volume of 284 pages on the "Butterflies and Moths of North America," in the composition of which, he found valuable facilities in the library of the Academy. In the preface of his work he says:—"I shall never forget, when a little boy, how my heart bounded, when one day Professor Joseph Leidy took me into the basement of the Philadelphia Academy of Natural Sciences, and pointing to the books on entomology, told me I had permission to examine their contents."

The "Chronological History of Plants," a posthumous work

by Dr. Charles Pickering, was published at Boston, in May, 1879. It is a quarto volume of 1222 pages. The work is conspicuous on account of the immense erudition and industry displayed by the author. It will ever stand an enduring monument significant of the respect due to his memory.

This volume is mentioned here because Dr. Pickering was a diligent student in the Academy, and served it efficiently and very constantly during eleven years, from the early part of 1827 till the middle of 1838. His studies in this Academy contributed largely to qualify him to deserve the very high position he attained in the scientific world.

Gratuitous labor has produced all the matter published by the Academy and its entomological section; and probably the authors of the volumes named have little hope of pecuniary profit from their work.

The fourth named purpose: to render knowledge of the natural sciences attractive and interesting.

During many years the students of all medical colleges in the city have been freely admitted to the museum on exhibiting their matriculating tickets to the janitor. Annual complimentary tickets have been issued to the teachers of the public schools, who are authorized to bring with them at each visit, a limited number of their pupils. The museum is accessible to all persons every day except Sunday, on the payment of an admission fee of ten cents. The amount received on this account indicates that the museum has been visited by 3540 persons besides members and those introduced by them.

Summaries of the proceedings of the Academy are published in the newspapers. They are supposed to be generally interesting.

In the ways indicated the several purposes of the institution are carried out, it is believed, with considerable success.

The sections afford opportunity to those having like pursuits and congenial tastes to work together, and are useful in their influence on the general interests of the society. It is not perceived that they are in any way detrimental to scientific progress.

The by-law of May, 1876, which authorizes the appointment of professors is inoperative, because the endowments for their support, which were hoped for at the time, have not been made, and because candidates have not applied for the positions.

In spite of the lack of professors, the Academy is reasonably

prosperous. It is free from debt. It has a substantial home and land enough upon which to extend it. It has a large and excellent library adapted to its purposes, and large collections of natural objects, many of which have not been studied. It is conjectured that the library and museum cannot be duplicated at this time by the expenditure of half a million of dollars.

Among its members are some who are conspicuous for attainments, and for the discoveries they have made; many who are skilful specialists, and very many more who are availing themselves so diligently of the facilities which the Academy affords that there is ground to hope that when those who are now held in the highest estimation shall have passed away, their places will be filled by men as great or even greater than they are now believed to be.

Notwithstanding the general character of its membership, and the unpretentious methods and policy which it has followed in the past, there are associated with the Academy some among those who have died, whose names are widely known and respected on account of the positions they attained in science. We may name for examples, Charles L. Bonaparte, John Cassin, Edward Hallowell, Wm. M. Gabb, Richard Harlan, Charles A. Leseur, James Aitken Meigs, Samuel George Morton, Thomas Nuttall, George Ord, Charles Pickering, Thomas Say, and Gerard Troost; and others might be added who in their day were worthy and respected on account of their attainments, and their contributions to scientific progress.

There is no substantial reason to mourn now on account of the present condition or the future prospects of the Academy.

The whole is submitted,

W. S. W. RUSCHENBERGER.

REPORT OF THE RECORDING SECRETARY.

The Recording Secretary respectfully reports that during the year ending Nov. 30, 1879, twenty-three members and eight correspondents have been elected.

The resignations of the following members have been received: Wm. Thompson, R. H. Day, C. P. Nancrede, J. S. Alexander, Frank Woodbury, Jos. Neumann, Thos. Stewardson, S. W. Penny-packer, and S. H. Guildford.